

2012

*The Economic Role of Oklahoma's  
Child Care Industry*



*Prepared for:*

**Oklahoma Child Care  
Resource and Referral  
Association (OCCRRA)**

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# The Economic Role of Oklahoma’s Child Care Industry

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*The **Oklahoma Child Care Resource and Referral Agency (OCCRRA)** is a resource and referral network working statewide to assure that Oklahoma families have access to quality care and education for their children. Information about OCCRRA services is available online at [oklahomachildcare.org](http://oklahomachildcare.org).*

***RegionTrack, Inc.** ([regiontrack.com](http://regiontrack.com)) is an Oklahoma City-based economic research firm specializing in regional economic forecasting and analysis. Mark C. Snead, Ph.D., economist and President of RegionTrack, is the principal author of the report.*

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## Key Facts about the Economic Role of Oklahoma's Formal Child Care Sector

1. Child care has quietly become a sizeable industry sector with nearly \$500 million in revenue in 2012.
  2. The state's licensed child care facilities provide employment for 20,500 workers (17,600 FTE) with earnings of \$290 million annually.
  3. Child care facilities purchased \$110 million of goods and services from other state industries in 2012.
  4. The state's working families are served by a network of almost 4,100 licensed child care facilities, including 1,700 child care centers and 2,400 family care homes.
  5. More than 112,000 children are enrolled in formal child care in Oklahoma, or almost one in five children of child care age with working parents.
  6. The number of children in formal care increased more than 75 percent over the past two decades, with more than 80 percent of children in care enrolled on a full-time basis.
  7. Paying for child care remains a key factor in the decision to work for many of Oklahoma's working families, with costs of \$3,500-7,000 per child annually for full-time care.
  8. Oklahoma's child care subsidy system provided \$134 million in benefits in 2012 to help those parents most in need go to work and achieve increased financial independence. Federal subsidies offset nearly all of the cost of the state subsidy system.
  9. Total economic activity in the child care sector is similar to that of the state's printing and ready-mix concrete manufacturing industries. Child care facilities employ approximately the same number of workers as the home health care, legal, and accounting industries statewide.
  10. Economic activity in the child care sector indirectly supports an estimated \$367 million of spillover economic output in other state industries and 3,900 additional jobs with earnings of \$133 million annually.
  11. Direct and spillover economic activity in the state's child care industry produced an estimated \$23 million in annual income and sales tax to state and local government in 2012.
  12. In just the past two decades, the role of formal child care has expanded well beyond maintaining the safe custody of children as parents participate in the workforce. Child care is now closely intertwined with the state's early childhood education and workforce development efforts.
  13. The number of children in care has leveled off in recent years, but demand for increased quality of care continues to drive change in the industry. Oklahoma has received considerable national recognition for its enhanced quality initiatives.
  14. Recent research on Oklahoma's child care system suggests that subsidized child care for low-income working parents can produce net economic benefits to the state economy even after accounting for the cost of subsidies.
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## **Introduction: The Economic Role of Child Care in Oklahoma**

### **The Economics of Child Care<sup>1</sup>**

Past efforts to evaluate the economic role of the child care sector traditionally focus on the role the industry plays in the decision of parents to work. This 'labor force' view of child care focuses on the role of child care in providing for the safe custody of children while parents participate in the workforce. Although helping parents gain financial independence through work remains the cornerstone of the industry's efforts, other economic dimensions of the industry are gaining increased attention.

More recently, the industry is viewed as both a growing sector of the state economy and an increasingly important component of the state's economic infrastructure. The increased number of children in care the past two decades has produced a sizeable industry sector that generates significant direct and indirect economic spillover impacts to the state economy. Along with its historical role in workforce development, child care is now working hand-in-hand with early childhood education efforts in the state and has become the entry point for many children into the state's education system. In short, the child care industry continues to serve its vital function of helping working parents maintain employment but has grown into a large industry sector that is now highly focused on the development of the children in its care.

### **Measuring Child Care's Economic Impact<sup>2</sup>**

This report provides an overview of the economic role played by the child care industry in the Oklahoma economy in 2012.<sup>3</sup> While much of the expansion of the role of child care has gone unnoticed in recent years, it is important to understand the range of economic impacts now being generated by the formal child care industry.

The first section of the report describes the current structure of the state's licensed child care system, including trends in the number of providers and children in care. The second section evaluates the direct contribution of the industry to state economic activity and provides estimates of the indirect, or spillover, economic impacts generated. The final section examines state efforts to enhance early childhood development through higher quality child care as well as research examining the impact of child care on overall state economic growth.

## Profile of Oklahoma's Child Care Industry

### Oklahoma's Licensed Child Care Facilities

The state's formal child care system has increasingly become a critical partner for Oklahoma's working families.<sup>4</sup> A network of almost 4,100 licensed and regulated child care centers and family care homes provide formal child care services to families in all 77 Oklahoma counties (*Figure 1a*).

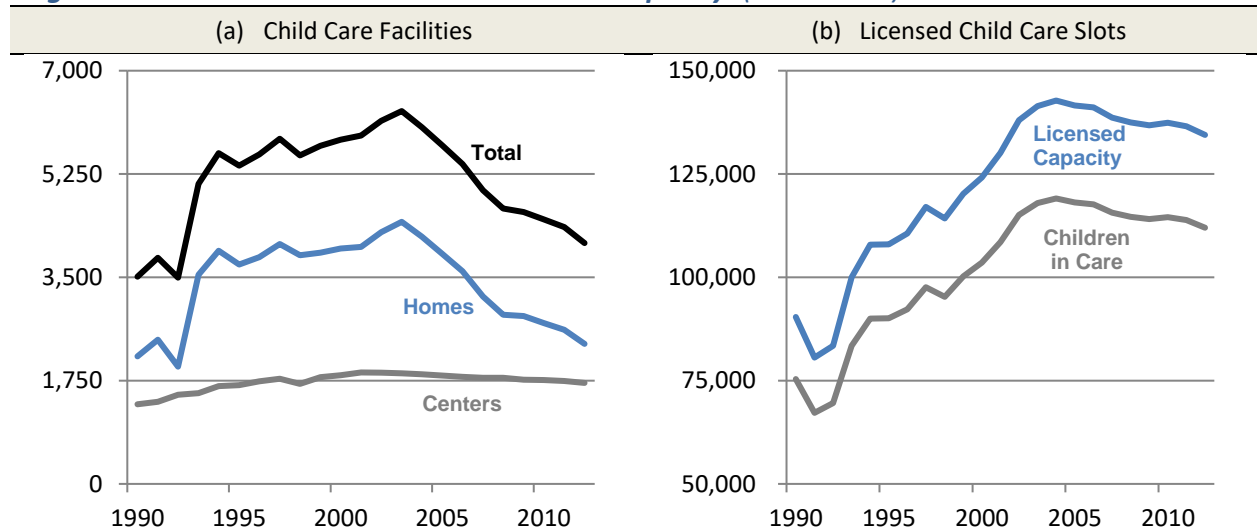
More than 112,000 children were enrolled at the state's licensed child care facilities in 2012.<sup>5</sup> This represents about one in five children statewide of child care age with working parents.<sup>6</sup> Although most children continue to receive care from family members or through other forms of informal care, many of the state's working parents, particularly single mothers, would not be able to remain in the labor force without access to formal child care services.

**More than 112,000 children are served by 4,100 licensed child care facilities operating in all 77 counties**

### The Expanded Role of Formal Child Care

The size of the child care industry in Oklahoma has undergone significant change the past two decades. Enrollment expanded rapidly between 1991 and 2004, as the number of children in care increased by more than 75% (*Figure 1b*). The expansion in the system was driven largely by welfare reform efforts and expanded access to Federally-funded child care subsidies.

**Figure 1. Oklahoma Child Care Facilities and Capacity (1990-2012)**



Source: OKDHS, OCCRRA, and RegionTrack

Since 2004, the industry has been in a slow consolidation phase, as child care enrollment has declined about 5 percent, from a peak of 119,000 children to 112,000 children in care currently. The slow downward trend in enrollment reflects a partial reversal of the surge that took place in the 1990s in the labor force participation rate for women, though nearly 60 percent of working-age women remain active in the labor force. More recently, continued declines in enrollment reflect a shift to more informal forms of care in the aftermath of the recent recession.

### Meeting the Needs of Working Parents

The mix of child care facilities has adapted over the years to meet the needs of working parents and provide choice in child care. Currently, the industry is comprised of about 1,700 child care centers and 2,400 family care homes (*Figures 1 and 2*). More than 80 percent of the children receiving care in both centers and family care homes are enrolled on a full-time basis.

**Figure 2. Child Care Facilities by Children in Care (2012)**

Facility Type	Licensed Facilities	Children in Care		
		Full-Time	Part-Time	Total
Child Care Centers	1,709	80,941	14,408	95,349
Family Care Homes	2,372	14,047	2,617	16,665
<b>Total</b>	<b>4,081</b>	<b>94,988</b>	<b>17,026</b>	<b>112,014</b>

Source: OCCRRA, OKDHS, and RegionTrack

Child care centers have long served as the backbone of the industry in caring for the majority of children. Currently, the state's 1,700 child care centers provide care for more than 95,000, or 85 percent, of the 112,000 children in formal care (*Figure 2*). While the number of centers has remained stable for many years, the number of licensed family care homes has fluctuated closely with overall demand for child care services the past two decades. The number of family care homes in Oklahoma more than doubled between 1992 and 2004 to meet the surge in demand for formal care in the period. The number of licensed homes has since contracted along with overall enrollment from nearly 4,500 homes in 2003 to fewer than 2,400 currently. Family care homes provided care for more than 16,500 children (15 percent of enrollment) statewide in 2012.

Parents also have access to child care facilities that meet a range of licensing criteria. The state instituted the "Star" quality rating system<sup>7</sup> for child care providers in 1998 in order to raise the quality of child care beyond basic licensing criteria, primarily by tying subsidy rates

to the quality of care. More than half of the state's licensed facilities, representing two-thirds of the available slots, currently hold national accreditation or meet additional qualifications that exceed the basic licensing requirements of a 1-Star facility (*Figure 3*).

**Figure 3. Child Care Facilities by Star Rating (2012)**

Star Rating	Facilities	Licensed Slots	Subsidized Slots
1 Star	1,932	42,316	1,408
1+ Star	160	1,801	604
2 Star	1,758	69,834	26,580
3 Star	231	20,522	8,955
Total	4,081	134,473	37,547

Source: OCCRRA and OKDHS

### Paying for Care in Oklahoma

Access to safe and affordable child care remains a critical concern for Oklahoma's working parents with young children. Paying for care is especially challenging for low-income working families, with annual costs of \$3,500-7,000 per child in full-time care. Child care is often the third-largest budget item for working families with children in paid care, typically behind only housing and transportation.

Because child care is simply not affordable for many families without financial assistance, the Oklahoma Department of Human Services takes an active role in assuring the availability of affordable and high quality care. Subsidies are available to help low-income working parents offset the cost of care and achieve a greater degree of financial independence. Subsidies are paid directly to child care providers and may include a family co-payment based on income. Subsidized care is also available to parents seeking job training.

**Working families face annual child care costs of \$3,500-7,000 per child in Oklahoma**

**Oklahoma's child care subsidy system provided \$134 million in benefits to low-income working families in 2012**

In 2012, the state subsidy system helped to offset the cost of care for more than 37,500 children and is a critical source of support for many of these working families (*Figure 3*). Payments to child care providers on behalf of parents totaled \$134 million, or approximately \$3,570 per child in subsidized care. These payments represent more than one-fourth of the total receipts of the state's



licensed facilities. Subsidy recipients have access to high quality care, with more than 90 percent of children receiving subsidies enrolled in Two- and Three-Star rated facilities.

Federal grants and tax credits also play an important role in funding child care services. Federal child care grants<sup>8</sup> and other child-care related funding to the state totaled \$132 million in 2012 and offset nearly all of the direct cost of the subsidy system. Oklahoma families received an additional \$30 million in tax credits from the Federal Child and Dependent Care Credit.<sup>9</sup>

## Economic Impact of Oklahoma's Child Care Industry

### Direct Economic Contribution of the Child Care Industry

In meeting the expanded role for formal child care the past two decades, Oklahoma's network of child care providers has quietly expanded into a sizeable component of the state economy. In 2012, the state's 4,100 licensed child care centers and family care homes generated an estimated \$496 million in revenue (*Figure 4*).<sup>10</sup> The expansion in economic activity has been driven by a rise in both the number of children in care and the cost of care. On a per child basis, the industry generated more than \$4,400 in revenue for each of the 112,000 children in care.

***Oklahoma's child care facilities generated almost \$500 million in revenue in 2012***





Child care is among the most labor-intensive of the state's services industries and relies upon 20,500 full- and part-time workers to manage facilities and provide direct care. Much of the direct economic impact of the industry occurs through the payment of \$290 million in labor income to workers (Figure 4) and the subsequent spending of these earnings within the state.

**Figure 4. Economic Profile of Oklahoma's Child Care Sector (2012)**

Facility Type	Licensed Facilities	Licensed Slots	Children In Care	Revenue (mil.)	Labor Income (mil.)	Employment
Child Care Centers	1,709	113,511	95,349	\$431.3	\$254.1	17,303
Family Care Homes	2,372	20,962	16,665	64.7	35.7	3,204
<b>Total</b>	<b>4,081</b>	<b>134,473</b>	<b>112,014</b>	<b>\$496.0</b>	<b>\$289.8</b>	<b>20,507</b>

Source: OCCRRA, OKDHS, and RegionTrack

The industry produces an unusually high share of total earnings relative to the size of the industry due to the labor-intensive nature of direct child care. Although average pay has increased along with growth in the industry, workers remain comparatively low-paid, with earnings of \$16,450 annually per full-time-equivalent worker.



Purchases of goods and services needed to operate a child care facility also exert significant direct economic impact on other state businesses (*Figure 5*). In 2012, Oklahoma's child care centers and family care homes purchased an estimated \$110 million in goods and services from other businesses within the state. A wide range of products and services are required, including business and financial services, real estate, food products, transportation and maintenance services, and utilities.

**Figure 5. In-State Purchases by Oklahoma Child Care Facilities (2012)**

Industry	Purchases
Business Services	\$23,604,005
Real Estate	16,547,087
Financial Services	16,152,455
State and Local Govt. Serv.	12,145,379
Food and Agricultural Prod.	11,410,413
Communications	7,765,567
Utilities and Energy	5,606,722
Retail and Wholesale Trade	4,960,794
Other Goods and Services	3,578,906
Professional Services	2,934,665
Transportation Services	2,842,012
Maint./Repair Of Structures	1,323,930
Entertainment Services	969,954
Total Purchases	\$109,842,000

Source: IMPLAN and RegionTrack

### The Child Care Industry is a Large Network of Small Businesses

The state's 4,100 child care facilities form a large network of traditional small businesses, many of which are women-owned and operated. Child care centers are fewer in number but are larger businesses on average and provide care for more children than family care homes. As a result, centers play a much larger role in the total economic impact generated by the industry than homes. Overall, child care centers account for more than 80 percent of the children enrolled in formal care and generate more than 80 percent of the industry's total gross receipts.

A typical operating<sup>11</sup> child care center in Oklahoma has 60 children enrolled, earns annual revenue of \$257,500, and provides payroll of \$152,000 for 7 full-time and 3 part-time workers. In comparison, a typical family care home is operated out of a personal residence, provides care for 6 or 7 children, earns annual revenue of \$28,500, and provides earnings of \$15,750 for 1 or 2 workers.

The aggregate size of the child care industry and its increased role in the state economy is evident when viewed alongside other major industry sectors (*Figure 6*). The industry's \$496 million in revenue is similar to that of the state's printing industry and exceeds that of the state's newspaper publishing and ready-mix concrete industries. Total wages paid in the industry exceed those paid in the retail clothing, radio and television broadcasting, and dry cleaning and laundry services sectors. The number of workers in child care is similar to grain farming and retail clothing stores, both of which are similarly-sized labor-intensive industries with significant part-time employment. And, similar to the personal care services and investigation and security services industries, the majority of the revenue generated within the industry is used to pay workers.

**Figure 6. Child Care vs. Similar-Sized Oklahoma Industries (2012)**

Industry	Industry Output (mil.)	Employment	Labor Income (mil.)
Grain farming	\$658.9	21,802	\$127.2
Retail clothing stores	582.4	13,184	248.9
Radio and TV broadcasting	573.0	2,849	284.6
Printing	515.2	3,686	144.9
<b>Child day care services</b>	<b>496.0</b>	<b>20,507</b>	<b>289.8</b>
Ready-mix concrete manu.	467.9	1,667	80.5
Newspaper publishers	419.6	4,029	151.4
Personal care services	395.7	8,017	231.1
Investigation and security serv.	360.4	8,332	228.6
Dry cleaning and laundry serv.	336.1	8,108	267.8

Source: Bureau of Labor Statistics, IMPLAN, and RegionTrack

The highly labor-intensive nature of child care places the industry alongside many of the state's key services sectors based on total employment (*Figure 7*). The industry employs approximately the same number of workers as home health care, legal services, and accounting-related firms. Child care providers also employ about a third more workers than the state's telecommunications firms and insurance carriers.

**Figure 7. Employment in Oklahoma Services Industries (2012)**

Industry	Employment
Truck transportation	29,404
Civic, social, and professional organizations	24,776
Home health care services	21,947
<b>Child day care services</b>	<b>20,507</b>
Legal services	19,928
Accounting, tax prep., bookkeeping, & payroll services	19,319
Architectural, engineering, and related services	18,874
Telecommunications	15,150
Insurance carriers	14,540

Source: Bureau of Labor Statistics, IMPLAN, and RegionTrack

### Spillover Economic Impacts

The direct economic activity in the child care industry in turn generates substantial economic spillover activity statewide. Economic models<sup>12</sup> can provide estimates of the share of economic activity in a regional economy that originates from a given industry sector such as child care. These models reflect the interrelationships among the various sectors of the economy and can provide useful estimates of the amount of spillover economic activity generated.

In describing the spillover impacts from child care, the revenue, employment, and earnings generated within the child care sector are deemed “direct” impacts. These direct impacts in turn generate additional economic activity referred to as “indirect” and “induced” spillover, or multiplier, effects.<sup>13</sup>

Based on model estimates, the \$496 million in direct economic activity in the state’s child care facilities in 2012 in turn supported an additional \$367 million in spillover economic output at other Oklahoma firms. This added output further supported an estimated 3,900 existing jobs and \$133 million in labor income<sup>14</sup> paid to workers in other industries across the state (Figure 8).

*Estimates suggest that economic activity within the child care sector indirectly supports \$367 million in other state economic output and 3,900 additional jobs with earnings of \$133 million annually*

**Figure 8. Child Care Industry Multiplier Effects (2012)**

Impact	Direct Effects	Indirect/Induced Multiplier Effects	Total Impacts
Output (Gross Revenue)	\$496.0 mil.	\$367.0 mil.	\$863.0 mil.
Employment (FTE jobs)	17,631	3,879	21,510
Labor Income	\$289.8 mil.	\$133.3 mil.	\$423.1 mil.

Source: IMPLAN and RegionTrack

Other spillover impacts from the child care sector include an estimated \$23.2 million in annual tax payments to state and local government (*Figure 9*). The primary tax streams are



state and local sales tax and state personal income tax.<sup>15</sup> The largest source is direct tax payments by the state’s child care facility operators and workers who earned an estimated \$290 million in direct labor income in 2012. These workers paid an estimated \$15.9 million in direct tax, including \$10.1 million in sales tax and \$5.8 million in state income tax. On average, state child care workers paid approximately 5.5 percent of their direct earnings in sales and income tax. Additional estimated tax revenue totaling \$7.3 million annually is generated as a result of the spillover effects on other state industries.

**Figure 9. Estimated Tax Revenue From Child Care Industry Activity (2012)**

Multiplier Effect (millions)	Labor Income	Taxes			Total Tax
		State Sales	Local Sales	State Income	
Direct	\$289.8	\$5.87	\$4.24	\$5.80	\$15.90
Indirect & Induced	133.3	2.70	1.95	2.67	7.32
Total	\$423.1	\$8.57	\$6.19	\$8.47	\$23.22

Source: RegionTrack, IMPLAN, and Oklahoma Office of State Finance

## Child Care and State Economic Development

The economic role of child care extends beyond the direct operations of the industry and the resulting spillover impacts generated. The availability of child care is now closely intertwined with the state's efforts to enhance early childhood development and maintain the quality and stability of the state's labor force. Meeting the state's ongoing demand for workers in coming years remains a concern given troubling demographic trends and demands for an increasingly skilled workforce.

### Raising the Quality of Care in Oklahoma

Demand for increased quality of care continues to drive the makeup of services provided by the state's child care industry. Research has long pointed to a strong link between the quality of child care, both formal and informal, and early childhood development.<sup>16</sup> The increased usage of formal child care services in Oklahoma the past two decades only underscores the need for increased focus on the quality of care.

The State of Oklahoma has long taken an active stance toward improving the quality of child care. A number of quality enhancement initiatives currently underway include efforts to improve training and certification of workers, provide access to professional consulting services, enhance child safety, provide better information flow, and increase compensation of child care workers. Among these efforts:

*The child care system in Oklahoma continues to undergo enhanced quality initiatives and receive national recognition*

- The Oklahoma Child Care Resource & Referral Association is a network of eight regional agencies formed to assist child care providers in their efforts to offer age-appropriate learning experiences in healthy, safe environments through training, technical assistance and consultation, as well as help parents find quality care that meets their needs.
- The Oklahoma Department of Human Services recently formed a group of Consultation and Technical Support Specialists (CATSS) to aid One-Star Plus and higher rated child care facilities to improve the quality of care through onsite consultation and technical support.
- The REWARD Oklahoma program provides education-based salary supplements to teachers, directors, and child care practitioners working with young children in child care settings.
- The Oklahoma Early Learning Guidelines for Three through Five Year Olds and The Oklahoma Early Learning Guidelines for Infants, Toddlers and Twos were adopted in 2007 and 2010, respectively. These initiatives provide guidance to teachers concerning the knowledge and skills children need in order to experience success.

- The Oklahoma Registry measures and recognizes through certification the professional development of individuals working in the early care and education field.
- Scholars for Excellence in Child Care awards scholarships to child care professionals to pursue coursework and certification in the areas of child development and early childhood education.
- The Child Care Mental Health Consultation program provides mental health professionals as consultants to licensed child care centers and homes.
- Oklahoma Core Competencies for Early Childhood Practitioners were adopted in 2009 to define best practices and standards for those who work with children in early care and education settings and programs.
- The Child Care Restricted Registry was established in 2010 to identify prospective child care workers who had a specified criminal history, confirmed child abuse or neglect history, or child care licensing history of revocation or denials of a child care license.

Oklahoma has received considerable national attention for its efforts to improve the quality of care at its licensed child care facilities. The National Association of Child Care Resource and Referral Agencies (NACCRRA) recently recognized Oklahoma as the top ranked state for child care center licensing and oversight in 2011.<sup>17</sup> The state was similarly ranked first by NACCRRA in their review of family child care home program requirements and oversight in 2012.<sup>18</sup>

### Economic Growth and Subsidized Child Care

The link between child care availability and the state's workforce also has implications for overall state economic growth. Economic research generally confirms that child care subsidies increase the likelihood that low-income workers will choose to enter the labor force. While subsidies bring new entrants into the workforce, concern remains that the cost of subsidies may offset any potential net economic gain to the state economy and that subsidies merely redistribute income at the expense of overall economic growth.

Recent research<sup>19</sup> on Oklahoma's child care system examines this question of the broad economic impact the current child care subsidy system has on state economic growth. Using a custom model<sup>20</sup> of the state economy, the results indicate that subsidies do in fact work to encourage low-income parents to use child care benefits as a means for entering the labor force. Many low-skilled workers will opt to participate in the labor force if assistance is available to offset the financial hurdle of child care costs.

*Research indicates that child care subsidies can produce net economic benefit to the state economy even after the cost of subsidies is considered*



The results also suggest that subsidies can provide net economic benefits to the Oklahoma economy even after accounting for the cost of subsidies. The key question is how the subsidies are funded. When new taxes are levied to pay for child care subsidies, the cost slightly more than offsets the overall increase in economic activity. However, when funding for subsidies is shifted from other forms of government spending, subsidies for working parents produce small net benefits to state economic growth. This suggests that subsidization of parents to enter the labor force produces more net economic activity, on average, than many alternative uses of state spending.

In general, the results from the study suggest that it is possible to raise the income of the least-skilled and most disadvantaged workers in Oklahoma by subsidizing child care without imposing a burdensome drag on overall state economic activity. Working parents, often the least skilled, can become more financially independent by engaging in productive work and not imposing an economic burden on the broader state economy. Hence, maintaining access to quality, affordable child care has the potential to serve as a viable economic development policy channel going forward.



## Endnotes

<sup>1</sup> For this report, the child care industry is defined as those formal child care centers and family care homes licensed and monitored by the State of Oklahoma. State law mandates that anyone who provides child care on a regular basis be licensed by the Oklahoma Department of Human Services. Care by family members and other forms of informal care are not regulated and are excluded from the report.

<sup>2</sup> This report serves as a follow-up to an initial study of the Oklahoma child care industry released in 2004. See: Snead, Mark C. *The Economic Impact of Oklahoma's Child Care Industry*. Jan. 2004. Oklahoma State University, Center for Applied Economic Research. Available online at <http://economy.okstate.edu/caer/files/okchildcareimpact2003.pdf>

<sup>3</sup> The profile of the child care industry and subsequent economic impact estimates are based on fiscal year 2012 data ended June 2012.

<sup>4</sup> The decision by a parent to enter the work force does not necessarily imply the use of paid, organized child care services. Many parents instead choose to share parental care duties with the other parent, use paid or unpaid relative care, or use other informal care arrangements.

<sup>5</sup> The number of children in care is determined using a database on child care facilities maintained by OCCRRRA. Available data items include licensed capacity, desired capacity, and vacant slots based on the desired capacity for each facility. The number of children enrolled is determined using the share of utilized licensed slots estimated at the facility level. In the sample, approximately 86.0 percent of licensed slots at child care centers, and 79.5 percent of licensed slots at family care homes, were utilized in December 2012. These estimated shares are used along with the total number of licensed slots in June 2012 as reported by OKDHS to estimate total enrollment by facility type.

<sup>6</sup> There are an estimated 598,504 children in Oklahoma ages 0-12 with either two working parents or a single parent who works. Source: Oklahoma State Data Center, Policy, Research, and Economic Analysis Division, Oklahoma Department of Commerce.

<sup>7</sup> In Oklahoma's Star system, One-Star facilities meet the state's basic licensing criteria; One-Star Plus facilities are making progress toward Two-Star certification; Two-Star facilities have either attained national accreditation or meet additional qualifications including an enhanced learning environment, increased parental involvement, and ongoing program assessment; Three-Star providers are nationally accredited or in compliance with Head Start performance standards and meet additional quality criteria.

<sup>8</sup> These grants are primarily from the Child Care and Development Fund (CCDF) and Temporary Assistance for Needy Families (TANF) programs. Federal grants and other direct child care-related funding received by the state totaled \$132.1 million in FY2012 based on OKDHS reports.

<sup>9</sup> The federal Child and Dependent Care Credit provides for a tax credit of up to 35 percent of the cost of care for a qualifying child or disabled adult.

<sup>10</sup> Revenue estimates are formed by multiplying the number of children in care by estimates of the revenue collected per child. Separate estimates of revenue per child are computed for both child care centers and family care homes by Star Rating using survey data collected by the Oklahoma Department of Human Services.

<sup>11</sup> A small percentage of licensed child care facilities (2 percent of child care centers and 4.5 percent of family care homes) will not be in active operation at any given time. Non-operating facilities are excluded in estimating the direct and spillover economic impact estimates per facility.

<sup>12</sup> A multi-sector IMPLAN input-output model of the Oklahoma economy is used to estimate the underlying linkages between the child care industry and the state economy. Caution must be exercised when using input-output multipliers to estimate the total economic activity 'supported' by an existing industry or firm. Input-output multipliers are intended to predict the change in economic activity that results from an incremental change in the current state of a regional economy. More specifically, the estimates we provide for the child care industry reflect input-output model predictions of the incremental impact that would result if the \$496 million in industry revenue in the existing child care industry was introduced to the state economy. The actual realized impact is determined by the overall adjustment process that would take place in each locale as child care industry expands.

<sup>13</sup> The indirect effect is the statewide inter-industry economic activity resulting from purchases by the state's child care facilities, while the induced effect reflects the economic activity resulting from new household spending out of employee earnings received as part of the direct and indirect effects. For convenience, the spillover impacts are typically summarized using economic impact multipliers. The multipliers quantify the amount of spillover activity resulting from each dollar of activity in the state child care sector. The indirect and induced effects are derived using the Type I multipliers  $[(\text{direct} + \text{indirect})/\text{direct}]$  and Type II multipliers  $[(\text{direct} + \text{indirect} + \text{induced})/\text{direct}]$  below:

**Oklahoma Child Care Services Economic Impact Multipliers**

	Direct Effect	Indirect Effect	Induced Effect	Type I Multiplier	Type II Multiplier
Output	1.00	0.31	0.43	1.31	1.74
Employment	1.00	0.10	0.12	1.10	1.22
Labor Income	1.00	0.19	0.27	1.19	1.46

Source: IMPLAN

More generally, the output multipliers provide an estimate of the amount of output generated statewide per dollar of new output generated in the child care industry. Employment multipliers provide an estimate of the number of jobs generated statewide per new job added in the child care industry. Labor income multipliers provide an estimate of the amount of new labor income generated statewide per new dollar of labor income added in the child care industry.

<sup>14</sup> The earnings multipliers are based on labor income rather than a narrower measure of income such as employee compensation because the child care industry has a large number of self-employed workers. Labor income better reflects the impact of the combined earnings of both wage and salary and self-employed workers.

<sup>15</sup> Direct personal income tax estimates assume a 2.0 percent average personal income tax rate for child care workers. Direct sales tax estimates assume that 45 percent of labor earnings are subject to state and local sales tax within Oklahoma at an average tax rate of 7.75 percent.

<sup>16</sup> For a comprehensive study of the effects of the quality of early childhood care on child development, see: *NICHD Study of Early Child Care and Youth Development*. National Institute of Child Health and Human Development. Available online at <http://www.nichd.nih.gov/research/supported/Pages/seccyd.aspx>.

<sup>17</sup> See "We Can Do Better." Mar. 2011. NACCRRA. The Department of Defense was the only entity to receive a ranking higher than Oklahoma. Available online at:

[http://www.naccrra.org/sites/default/files/default\\_site\\_pages/2011/wcdb\\_sum\\_chpts1-5.pdf](http://www.naccrra.org/sites/default/files/default_site_pages/2011/wcdb_sum_chpts1-5.pdf)

<sup>18</sup> See "Leaving Children to Chance." Mar. 2012. NACCRRA.

[http://www.naccrra.org/sites/default/files/default\\_site\\_pages/2012/lcc\\_report\\_full\\_april2012.pdf](http://www.naccrra.org/sites/default/files/default_site_pages/2012/lcc_report_full_april2012.pdf)

<sup>19</sup> See: Rickman, Dan S. and Mark C. Snead. "A Regional Comparative Static CGE Analysis of Subsidized Child Care." *Growth and Change*. Mar. 2007. Vol. 38, No. 1, pp. 111-139.

<sup>20</sup> The study uses a custom Computable General Equilibrium (CGE) model of the state of Oklahoma to evaluate the distributional economic impacts of child care subsidies for low-skilled, low-wage workers.

